Proposal Full View

Print

Applicant Information

Organization Name	City of Turlock *
Tax ID	**946000445**
Proposal Name	Eastern Turlock Subbasin LGA Grant Application *
Proposal Objective	In order to develop an understanding of the hydrogeology of the eastern Turlock Subbasin and to apply that understanding to predict impacts of increased groundwater use on subbasin groundwater levels and quality, the City of Turlock (on behalf of the Turlock Groundwater Basin Association) is proposing to conduct a detailed hydrogeologic characterization of a 115-square-mile portion of the eastern Turlock Subbasin (Project Area). The Project will accomplish the following objectives: • Develop a comprehensive, updated hydrogeologic conceptual model for the aquifers and groundwater system in the Project Area • Document changing land use and groundwater use in order to better evaluate land use impacts on groundwater • Revise, expand, and apply a subbasin-wide numerical groundwater flow model as a tool to assist with land use planning and groundwater management decisions in the subbasin • Support ongoing groundwater monitoring and management programs including the CASGEM program (supplementing the current monitoring plan that covers the Applicant's service area), mapping of recharge zones as required by Assembly Bill 359, and implementation of the Turlock Groundwater Basin Association (TGBA) GWMP. *

Budget

Other Contribution	$0.00
Local Contribution	$0.00
Federal Contribution	$0.00
Inkind Contribution	$0.00
Amount Requested	$250,000.00 *
Total Project Cost	$250,000.00 *

Geographic Information

Latitude *	DD(+/-) 37	MM 33	SS 38	
Longitude *	DD(+/-) -120	MM 30	SS 14	
Longitude/Latitude Clarification	DD 37, MM 33, SS 38.567 N; DD -120, MM 30, SS 14.195 W; added because decimals couldn't be included in SS fields above.	Location		The Project Area covers about 115 square miles in the eastern third of the Turlock Subbasin
County		Stanislaus,Merced *		
Ground Water Basin		San Joaquin Valley-Turlock		
Hydrologic Region		San Joaquin		

Watershed	San Joaquin Valley Floor 95 6535

Legislative Information

Assembly District	26th Assembly District *
Senate District	12th Senate District *
US Congressional District	District 19 (CA) *

Project Information

Project Name: Hydrogeologic Characterization of

Implementing Organization	City of Turlock
Secondary Implementing Organization	Turlock Groundwater Basin Association
Proposed Start Date	4/1/2013
Proposed End Date	3/31/2015
Project Scope	Develop conceptual hydrogeologic and numerical flow models for the Project Area to analyze land use impacts on groundwater.
Project Description	The City of Turlock (Applicant), on behalf of the Groundwater Basin Association (TGBA), is proposing a comprehensive Hydrogeologic Characterization of the Eastern Turlock Subbasin (Project). The Project will focus on the Foothills non-district areas and eastern portions of Eastside Water District and Merced Irrigation District, covering about 115 square miles (Figure 4-1, Attachment 4). In this area, groundwater is the primary source of supply and groundwater conditions are not well understood. Recent increases in irrigated acreage indicate that land use and groundwater conditions are intensifying. The Project Area is also adjacent to areas of persistent groundwater level declines as illustrated by water level contours on Figure 4-2 (Attachment 4), which also highlights that water levels are not known in the Project Area. Significant knowledge/data gaps exist in this area; however, most of these can be reduced or bridged with comprehensive compilation and systematic analysis of existing data. The Project will provide aggressive data collection and database/GIS development with extensive QA/QC measures. It will include an analysis of hydrostratigraphy, groundwater occurrence and flow, groundwater quality and use, land use, soils and vadose zone properties, restrictive layers (e.g., duripans), and water budgets. An updated and expanded numerical groundwater flow model will be developed for the entire subbasin (with a focus on the Project Area), incorporating data and information from two existing groundwater models. The new Project numerical model will be applied to evaluate groundwater impacts from changing land use and serve as an improved tool to support the GWMP. Project results will be used to support future monitoring and management programs such as CASGEM, recharge mapping associated with AB 359, and groundwater management activities associated with the GWMP.
	Develop a comprehensive, updated hydrogeologic conceptual model for the Project Area, documenting land

Project Objective	use and groundwater conditions; revise, expand and apply a subbasin-wide numerical groundwater flow model as a tool to analyze groundwater impacts from changing land use in the Project Area; and support ongoing groundwater monitoring and management programs including the CASGEM program, mapping of recharge zones (AB359), and implementation of the Turlock Groundwater Basin Association GWMP.

Project Benefits Information

Project Benefit Type	Benefit Type	Measurement	Description
Primary	Other-Hydrogeological	115	The Project involves the scientific research that provides a foundation for groundwater and land use planning over the entire 115 square miles of the Project Area
Secondary	Modeling-Groundwater modeling developed or improved	542	The Project model will provide an improved tool for groundwater management over the entire 542-square mile subbasin
Tertiary	Other-Groundwater Studies	115	The Project will evaluate groundwater in storage and recharge areas in the 115 square miles of the Project Area
Quaternary	Other-Data bases developed	115	The Project will develop the first water level, water quality, and wells database in the 115-square mile Project Area

Project Objective

Budget

Other Contribution	0
Local Contribution	0

Federal Contribution	0
Inkind Contribution	0
Amount Requested	250000
Total Project Cost	250000

Geographic Information

Latitude DD(+/-)	37	MM	33	SS	38
Longitude DD(+/-)	-120	MM	30	SS	14

Longitude/Latitude Clarification: DD 3 Location: The Project Area covers about 115 square mile

County Stanislaus,Merced Ground Water Basin San Joaquin Valley-Turlock Hydrologic Region San Joaquin WaterShed

San Joaquin Valley Floor 95 6535

Legislative Information

Assembly District	26th Assembly District
Senate District	12th Senate District
US Congressional District	District 19 (CA)

Section : Applicant Information and Question's Tab

APPLICANT INFORMATION AND QUESTION'S TAB

Q1. Applicant Information

Provide the agency name, address, city, state, and zip code of the applicant submitting the application.

City of Turlock 156 S. Broadway, Ste. 230 Turlock, Ca 95380

Q2. Proposal Description:

Provide a brief abstract of the Proposal. This abstract must provide an overview of the proposal including the main issues and priorities addressed in the proposal. Within the abstract, please describe how the proposal relates to the GWMP's BMO's.

The City of Turlock (Applicant), on behalf of the Turlock Groundwater Basin Association (TGBA), is proposing a comprehensive Hydrogeologic Characterization of the Eastern Turlock Subbasin (Project). The Project will focus on the Foothills non-district areas and eastern portions of Eastside Water District and Merced Irrigation District, covering about 115 square miles (Figure 4-1, Attachment 4). In this area, groundwater is the primary source of supply and groundwater conditions are not well known. Recent increases in irrigated acreage indicate that land use and groundwater conditions are intensifying. The Project Area is also adjacent to areas of persistent groundwater level declines as illustrated by water level contours on Figure 4-2 (Attachment 4), which also highlights that water levels are not known in the Project Area. Significant knowledge/data gaps exist in this area, but most can be reduced or bridged with comprehensive compilation and systematic analysis of existing data. The Project will provide aggressive data collection and database/GIS development with extensive QA/QC measures. It will include an analysis of hydrostratigraphy, groundwater occurrence and flow, groundwater quality and use, land use, soils and vadose zone properties, restrictive layers (e.g., duripans), and water budgets. An updated and expanded numerical groundwater flow model will be developed for the entire subbasin (with a focus on the Project Area), incorporating data and information from two existing groundwater models. The new Project numerical model will be applied to evaluate groundwater impacts from changing land use and serve as an improved tool to support the GWMP. This Project is linked to five of the seven stated GWMP Basin Management Objectives (BMOs) in the TGBA GWMP as listed below (GWMP excerpts are provided as Supporting Documentation in Attachment 3): * BMO-1: Maintain adequate water levels in the groundwater basin to support beneficial uses. * BMO-2: Protect groundwater quality and implement measures, where feasible, to reduce the potential movement of existing contaminants. * BMO-3: Monitor groundwater extraction to reduce the potential for land subsidence. * BMO-4: Promote conjunctive use of groundwater and surface waters. * BMO-7: Continue coordination and cooperation between the TGBA

members and customers. It is clear that the proposed Project directly supports each of these BMOs, and, in particular, the first three BMOs. The Project Area may have less groundwater in storage, may connect directly with an area of persistent water level declines, may influence the vertical gradients and movement of poor-quality groundwater, and may be subject to local overdraft conditions that could exacerbate water level declines to the west. Collectively, these issues highlight the need for an improved understanding of the eastern hydrogeology in order to achieve the stated BMOs (especially BMO-1 and -2). Although inelastic subsidence (BMO-3) has not been documented as a problem in the subbasin, groundwater extractions require monitoring to achieve this BMO, which is supported by the Project. Using data from small water systems (as available), well permits, and other land use data, groundwater use will be estimated for the eastern subbasin. In addition, the Project may also assist in achieving BMO 4 by providing fundamental data necessary for evaluation of conjunctive use projects. BMO 7 is also directly supported by the Project. The 13 TGBA members, along with two additional local agencies, will serve as the Project Advisory Committee (PAC) and will monitor the progress and performance of the Project. They will review quarterly progress reports, six technical memoranda, and draft and final Project Report. They will host three public workshops and provide dissemination of project materials through their respective City Council and Board of Directors meetings.

Q3. Project Director:

Provide the name and details (including email) of the person responsible for executing the grant agreement for the applicant. Persons that are subcontractors to be paid by the grant cannot be listed as the Project Director.

Roy Wasden, City Manager, City of Turlock 156 S. Broadway, Ste.230 Turlock, Ca 95380 (209) 668-5540 Ext.1101 rwasden@turlock.ca.us

Q4. Project Manager:

Provide the name and contact information (including email) of the Project Manager from the applicant agency or organization that will be the day-to-day contact on this application.

Dan Madden, Municipal Services Director, City of Turlock 156 S. Broadway, Ste. 270 Turlock, Ca 95380 (209) 668-5590 Ext.4401 dmadden@turlock.ca.us

Q5. Additional Information:

Based on the region's location, what is the applicable DWR region office (Northern, North Central, South Central, or Southern)? The following link can be used to view each DWR region office boundaries:

http://www.water.ca.gov/groundwater/groundwater_basics/gw_contacts_info.cfm

1) ☐ Northern Region
2) ☐ North Central Region
3) ☑ South Central Region
4) ☐ Southern Region

Q6. Additional Information:

Provide the Date of GWMP Adoption, if any, and list the pursuant Water Code Section or other legal Authority in which it was adopted.

The GWMP was adopted by the City of Turlock City Council on February 26, 2008 via Resolution 2008-047 pursuant to Part 2.75 (commencing with Section 10750 et seq.) of Division 6 of the California Water Code (CWC) including requirements of Senate Bill 1938 (Resolution 2008-047 is provided in Attachment 3).

Q7. Additional Information:

Provide a list of documents that support and indicate collaboration with other local public agencies with regard to the management of the affected groundwater basin (e.g., MOUs, MOAs, JPAs, adoption of a GWMP, recognition of county ordinances in permitting processes, or party to a groundwater basin adjudication order).

Document #1. Memorandum of Understanding Establishing the Turlock Groundwater Basin Association, 2001. (provided in Attachment 3, as Supporting Documentation, Appendix C). Document #2. Memorandum of Understanding Among City of Modesto, City of Turlock, and City of Ceres for Integrated Regional Water Management Planning (IRWMP), 2011. (Recitals/Title page and goals provided in Attachment 4, Supporting Documentation-2). Document #3. Drinking Water

Supply Project, Joint Exercise of Powers Agreement Between The Cities of Ceres, Modesto and Turlock for the Purpose of Creating a Joint Powers Authority Responsible for Decisions in Certain Matters Pertaining to the Municipal and Industrial Water Supply Programs for the Aforementioned Public Entities, 2011. (Recitals (title) page provided in Attachment 4, Supporting Documentation-3). Document #4. Resolution 2008-047, In the Matter of Adopting the Turlock Groundwater Basin Groundwater Management Plan, Thereby Amending and Superseding the Existing Groundwater Management Plan Adopted November 25, 1997, Pursuant to Part 2.75 (Commencing with Section 10750) of Division 6 of the California Water Code, Adopted by the City Council of the City of Turlock, February 26, 2008. (Provided as Attachment 3).

Q8. Additional Information

Name the entity(ies) providing the fund(s) reported in the above Budget section under the category "Other Contribution". If there are no "Other Contributions" Please answer this question with, "No Other Contributions".

No Other Contributions.

Q9. Eligibility:

List the urban water suppliers that will receive funding from the proposed grant. Please provide the agency name, a contact phone number and email address. Those listed must submit self certification of compliance with CWC §525 et seq. and AB1420, see Attachment 10. If there are none, so indicate.

City of Turlock- Dan Madden, (209)668-5590 Ext. 4401, dmadden@turlock.ca.us. Statement of compliance, letter from DWR stating that the City is eligible for grant funds, and Certification for Compliance with AB1420 and S525 are included in Attachment 10, Supporting Documentation.

Q10. Eligibility:

Have all of the urban water suppliers, listed in Q9 above, submitted complete 2010 UWMP to DWR? If not, explain why. Have those plans been verified as complete by DWR? If not, explain current status.

Yes. The City of Turlock submitted a complete 2010 UWMP to DWR on June 30, 2011. DWR verified that the UWMP was complete and had addressed the requirements of the CWC via letter dated May 15, 2012 (letter provided as Supporting Documentation-3 in Attachment 10).

Q11. Completeness Check:

Have all of the fields in the application been completed?

Yes

Q.11. Completeness Check (cont)

If no, please explain. If yes, answer this question with "NA".

NA

Section : Application Attachments Tab

APPLICATION ATTACHMENTS TAB

Attachment 1. Authorizing Documentation

Upload authorizing documentation here. Ensure file name is consistent with the LGA Grant PSP, Section II. "How to Submit An Application".

Last Uploaded Attachments: Att1_LGA12_Turlock_AuthDoc_1of1.PDF

Attachment 2. Eligible Applicant Documentation

Upload eligible documentation here. Ensure file name is consistent with the LGA Grant PSP, Section II. "How to Submit An Application".

Last Uploaded Attachments: Att2_LGA12_Turlock_EligDoc_1of1.pdf

Attachment 3. Status of GWMP

Upload the GWMP documentation here. Ensure file name is consistent with the LGA Grant PSP, Section II. "How to Submit An Application".
Last Uploaded Attachments: Att3_LGA12_Turlock_GWMP_1of2.pdf,Att3_LGA12_Turlock_GWMP_2of2.pdf

Attachment 4. Project Description

Upload project description here. Ensure file name is consistent with the LGA Grant PSP, Section II. "How to Submit An Application".
Last Uploaded Attachments: Att4_LGA12_Turlock_ProjD_1of2.pdf,Att4_LGA12_Turlock_ProjD_2of2.pdf

Attachment 5. Work Plan

Upload work plan here. Ensure file name is consistent with the LGA Grant PSP, Section II. "How to Submit An Application".
Last Uploaded Attachments: Att5_LGA12_Turlock_WrkPln_1of1.pdf

Attachment 6. Budget

Upload budget here. Ensure file name is consistent with the LGA Grant PSP, Section II. "How to Submit An Application".
Last Uploaded Attachments: Att6_LGA12_Turlock_BUDGET_1of1.pdf

Attachment 7. Schedule

Upload schedule here. Ensure file name is consistent with the LGA Grant PSP, Section II. "How to Submit An Application".
Last Uploaded Attachments: Att7_LGA12_Turlock_SCHED_1of1.pdf

Attachment 8. Quality Assurance

Upload quality assurance documentation here. Ensure file name is consistent with the LGA Grant PSP, Section II. "How to Submit An Application".
Last Uploaded Attachments: Att8_LGA12_Turlock_QA_1of1.pdf

Attachemnt 9. Past Performance

Upload past performance documentation here. Ensure file name is consistent with the LGA Grant PSP, Section II. "How to Submit An Application".
Last Uploaded Attachments: Att9_LGA12_Turlock_PERFORM_1of2.pdf,Att9_LGA12_Turlock_PERFORM_2of2.pdf

Attachment 10. AB1420 and Water Meter Implementation Compliance

Upload 1420 and water meter implementation documentation here, if applicable. Ensure file name is consistent with the LGA Grant PSP, Section II. "How to Submit An Application".
Last Uploaded Attachments: Att10_LGA12_Turlock_1420_1of2.pdf,Att10_LGA12_Turlock_1420_2of2.pdf